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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/769,510	01/30/2004	Michael Eneboe	01-490/1C	8371

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EXAMINER	
TO, TUYEN P	

ART UNIT	PAPER NUMBER
2825	

DATE MAILED: 11/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/769,510	ENEBOE ET AL.	
	Examiner	Art Unit	
	Tuyen To	2825	TT

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *03* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) *13-20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *06/24/05; 04/20/05;* 01/19/05; 10/19/04
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This is a response to the communication filed on 01/30/2004. **Claims 1-20** are pending.

Election/Restrictions

1. This application contains claim groups directed to the following patentably distinct species of the claimed invention:

Group Invention

I. **(Claims 1-12)** drawn to a method with data specifying a plurality of interconnects and components.

II. **(Claims 13-20)** drawn to a system with component characteristics, firm macro, and soft macro.

2. During a telephone conversation with Peter Scott (Reg. No. 33279) on 11/03/2005, a provisional election was made **without traverse** to prosecute the invention of **group I (claims 1-12).** Affirmation of this election must be made by applicant in replying to this Office action. **Claims 13-20 are withdrawn** from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

3. Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claims are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement is traversed (37 CFR 1.143).

Applicant is advised that cancellation of non-elected claims is required.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

5. A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application; see 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. **Claims 1 and 6** are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over **claim 1 of U.S. Patent No. 6751783**.

7. **Claims 10 and 12** are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over **claim 2 of U.S. Patent No. 6751783**.

8. **Claim 5 is** rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over **claim 1 of U.S. Patent No. 6751783** (in the step of optimizing the design of the integrated circuit must include a direct connectivity definition in order to synthesize an IC design).

Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims in the patent are similar to the claims in the present application and substantially read on the claim in the application and vice versa, the claims in the present application is similar to and read on the claims in the patent.

9. **Claim 2-4, 7- 9, and 11 are** rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over **claims 1 and 2 of U.S. Patent No. 6751783 (Eneboe et al.) and in view of US 6026226 (Miller et al.)**.

10. Claims 1 and 2 of the patent suggest all limitations of claims 2-4, 7-9, and 11 except utilize a synthesis tool. Miller et al. teach using a synthesis tool to generate an IC design (col. 4, lines 1-35; col. 10, lines 53-65). It would been obvious to one ordinary skilled in the art to utilize a synthesis tool to generate an optimized IC design as taught in claims 1 and 2 of the patent.

11. Regarding to claim 8, ASCIs are well known IC design. Therefore, it would have been obvious to one ordinary skilled in the art, the IC design as taught in claim 1 and 2 would be ASICs for so that variety of design applications could be utilized.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the

international application designated the United States and was published under Article 21(2) of such treaty in the English language.

13. Claims 1-12 are rejected under 35 U.S.C. 102(e) as being anticipated by **Miller et al. (US Patent No. 6,539,531)**

Referring to claims 1 and similarly recited claim 10, Miller et al. disclose a method of designing integrated circuit (IC) and their interconnect system including IC component cells and interconnect component cells in cell library. Each interconnect component cell includes data that specifying both physical and behavioral model of the component. Such interconnect component cells describe not only internal IC components but also describe external interconnect system components .

Miller et al. disclose both IC and its interconnect system are designed by selecting and specifying interconnections between component cells including in a cell library. Interconnections between component cells are flexibly designed to act like filters tuned to optimize desired frequency response characteristics. The behavior models of the IC and its interconnection systems, based on the behavior models of the their selected component, are determined where the IC and its interconnection system meet various performance criteria and constraints (for example bandwidth) (see fig. 6, figs. 11-23 and the description, col. 5, lines 66 to col.7, line 3, col.8-10; col. 13, line 20 to col. 14, line 47). Thus, Miller et al. teach designing an IC including its interconnection system based at least on bandwidth and interconnect configuration.

Referring to claims 2-9 and 11-12, Miller et al. disclose a method that utilizing a synthesis tools to synthesize and an IC having the specified design (Fig. 6); the optimized design including a specified characteristic including a bandwidth (Figs. 11-13; col. 13); wherein a direct connectivity definition, derived from the optimized data is utilized to synthesize an IC (Figs. 6 and 11-13); wherein optimizing including arranging components of the IC and specifying bandwidth between components (col. 13, Figs 6 and 11-13): wherein optimizing is performed without user intervention by an agent and IC is design and fabricated depended on applications (col. 13, col. 15, lines 8-30; Figs. 6 and 11-13). In addition, Miller et al. teach interconnect systems are flexibly designed to act like filters tuned to optimize desired frequency response characteristic; and the

structural models of the interconnect systems developed during the design process guide subsequent fabrication of interconnect systems for both the IC's intended testing and operating environment (see summary). This would correspond that the data is programmed into a self-programmable IC.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuyen To whose telephone number is (571) 272-8319. The examiner can normally be reached on 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Smith can be reached on (571) 272-1907. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tuyen To
Patent Examiner
AU 2825

VUTHE SIEK
PRIMARY EXAMINER